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09/919,555	07/31/2001	Herbert F. Cattell	10010326-2	4382

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AGILENT TECHNOLOGIES, INC.
Intellectual Property Administration
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EXAMINER

FORMAN, BETTY J

ART UNIT	PAPER NUMBER
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1634

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 09/919,555	Applicant(s) CATTELL ET AL.	
	Examiner BJ Forman	Art Unit 1634	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 April 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,4-16 and 45-54 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,4-16 and 45-54 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2 April 2008 has been entered.

Status of the Claims

2. This action is in response to papers filed 2 April 2008 in which the previous rejections were traversed and a Declaration by Herbert Cattell was submitted.

The Declaration under 37 CFR 1.132 filed 2 April 2008 is sufficient to overcome the rejection of claims 1-2, 4-16 and 45-54 based upon U.S. Patent No. 6,180,351 and U.S. Patent Application Publication No. 2002/0102559.

The previous rejections in the Office Action dated 10 December 2007 under 35 U.S.C. 102 are withdrawn in view of the Declaration. The previous rejections under and 35 U.S.C. 103(a) are maintained. Applicant's arguments have been thoroughly reviewed and are discussed below.

Claims 1-2, 4-16 and 45-54 are under prosecution.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2, 4-16, 47-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Zeleny et al (U.S. Patent No. 6,215,894, filed 26 February 1999) in view of Ellison et al (U.S. Patent Application Publication No. 2002/0086319A1, filed 13 November 2000).

Regarding Claims 1, 2, 10, 47 and 48, Zeleny et al teach a method of producing and using an addressable array comprising fabricating an addressable array of probes by depositing the probes onto different regions of a substrate, saving in a memory array-related data (i.e. identifier) and in a processing unit of a user station, reading the identifier, automatically selecting protocols for processing the array (Column 2, lines 29-44; Column 3; and Fig. 3-4). Zeleny et al teach the method further comprising reading the array according to the retrieved information to obtain data and processing that data (steps 60, 64, 66, 68, 70, Fig. 4 and Columns 3-4).

Zeleny et al do not specifically teach shipping the fabricated array and forwarding the array related data to a remote location. However, shipping arrays to end users was well known in the art at the time the claimed invention was made as taught by Ellison et al. Ellison et al teach a similar method for generating an addressable array of

chemical moieties comprising depositing moieties onto different regions of the substrate, saving in a memory array related data and shipping the array and forwarding the array related data to a remote location i.e. to shipping address contained in the machine readable information (§ 8). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the shipping of Ellison et al to the arrays of Zeleny et al and based on the location of the end user, ship the arrays to the end user for the obvious benefits of shipping e.g. commercial production and delivery of a desired product.

Regarding Claims 4-5, 11-12, 49-50, Zeleny et al teach the method wherein the probes are biopolymers (Abstract) and Ellison teaches the biopolymers are DNA (§ 40-43).

Regarding Claims 6, 13, 51, Zeleny et al teach the method wherein the memory is a database and the method retrieves data from the memory and communicates the data to the user (i.e. scanner, Column 3, Fig. 3-4).

Regarding Claims 7-8, 52-53, Zeleny et al teach the method wherein the memory is a portable storage medium e.g. (barcode) which is transported with the array for scanning (Column 3).

Regarding Claims 9, 54, Zeleny et al teach the method wherein the substrate has applied thereto array related data e.g. identifier (Column 3) but they do not teach the identification code comprises a communication address. However, Ellison et al teach the similar method of generating an array wherein the array has applied thereto identification code including a communication address from with the identity map will be

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communicated i.e. customer (§ 8) wherein the address on the substrate identifies customer and/or billing information. It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to include the communication address as taught by Ellison et al in the identification code on the substrate of Zeleny et al to thereby identify customer via the address as taught by Ellison et al (§ 8).

Regarding Claim 14, Zeleny do not teach shipping the portable storage mediums to multiple remote locations. However, shipping arrays to end users was well known in the art at the time the claimed invention was made as taught by Ellison et al. Ellison et al teach a similar method for generating an addressable array of chemical moieties comprising depositing moieties onto different regions of the substrate, saving in a memory array related data and shipping the array and forwarding the array related data to a remote location i.e. to shipping address contained in the machine readable information (§ 8). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the shipping of Ellison et al to the arrays of Zeleny et al and, based on the location of the end user, ship the arrays to the end user for the obvious benefits of shipping e.g. convenience and availability.

Regarding Claims 16-15, Zeleny does not teach that shipping the arrays to the same location from which the biopolymers used to construct the array were received. However, Ellison et al teach the similar method of generating an array wherein the array has applied thereto identification code including a communication address from which the identity map will be communicated i.e. customer (§ 8) wherein the address on the substrate identifies customer and/or billing information. It would have been obvious

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to one of ordinary skill in the art at the time the claimed invention was made to include the communication address as taught by Ellison et al in the identification code on the substrate of Zeleny et al to thereby identify customer proving the array samples via the address as taught by Ellison et al (¶ 8) for the obvious benefits of maintaining correct correlations between the customer and the array.

Regarding Claim 46-47, Zeleny et al teach that the control probes are useful for calibrating and adjusting the scanner thereby facilitating scanning (Column 3, lines 19-25). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to including data as to whether a control probe is present desired by Zeleny et al (Column 3, lines 19-25).

5. Claims 1, 2, 4-16 and 47-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perttunen et al (U.S. Patent No. 5,968,728, issued 19 October 1999) in view of Ellison et al (U.S. Patent Application Publication No. 2002/0086319A1, filed 13 November 2000).

Regarding Claim 1 and 47, Perttunen et al teach a method of generating an addressable array of chemical moieties on a substrate comprising: depositing the moieties onto different regions of the substrate so as to fabricate the array; before the

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array has been exposed to a sample, saving in a memory array related data said data comprising instructions for reading the array or instruction of processing the array (Column 3, lines 54-67) wherein the array and array related data is utilized by an end user (Column 8, lines 38-41 and Column 9, lines 63-Column 10, lines 2) which clearly suggests that the array is sent from the place of origin but they do not specifically teach shipping the fabricated array and forwarding the array related data to a remote location. However, shipping arrays to end users was well known in the art at the time the claimed invention was made as taught by Ellison et al. Ellison et al teach a similar method for generating an addressable array of chemical moieties comprising depositing moieties onto different regions of the substrate, saving in a memory array related data and shipping the array and forwarding the array related data to a remote location i.e. to shipping address contained in the machine readable information (§ 8). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the shipping of Ellison et al to the arrays of Perttunen et al and, based on the location of the end user, ship the arrays to the end user for the obvious benefits of shipping e.g. convenience and availability.

Perttunen et al further teach that the user, at a user location retrieve array related data (e.g. mapping) and selects machine readable algorithms (e.g. instructions) (Column 3, lines 45-67 and Fig. 2) for reading and processing by user (Column 5, lines 7-20 and Column 7, line 40-Column 8, line 67).

Regarding Claim 2 and 48, Perttunen et al teach a method of generating an addressable array of chemical moieties on a substrate comprising: depositing the

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moieties onto different regions of the substrate so as to fabricate the array; before the array has been exposed to a sample, saving in a memory array related data said data comprising instructions for reading the array or instruction of processing the array (Column 3, lines 54-67) wherein the array related data is saved in association with an identifier i.e. id code; wherein the identifier is associated with the array by applying the identifier to the substrate or housing carrying the substrate (Column 4, line 61-Column 5, line 7 and Fig. 10-12) (Column 7, line 40-Column 8, line 62, Fig. 10, # 112 & 114, Fig. 11, # 132 & 136 and Fig. 12, # 146) wherein the array and array related data is utilized by an end user (Column 8, lines 38-41 and Column 9, lines 63-Column 10, lines 2) which clearly suggests that the array is sent from the place of origin but they do not specifically teach shipping the fabricated array and forwarding the array related data to a remote location. However, shipping arrays to end users was well known in the art at the time the claimed invention was made as taught by Ellison et al. Ellison et al teach a similar method for generating an addressable array of chemical moieties comprising depositing moieties onto different regions of the substrate, saving in a memory array related data and shipping the array and forwarding the array related data to a remote location i.e. to shipping address contained in the machine readable information (§ 8). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the shipping of Ellison et al to the arrays of Perttunen et al and, based on the location of the end user, ship the arrays to the end user for the obvious benefits of shipping e.g. convenience and availability.

Perttunen et al further teach that the user, at a user location retrieve array related data (e.g. mapping) and selects machine readable algorithms (e.g. instructions) (Column 3, lines 45-67 and Fig. 2) for reading and processing by user (Column 5, lines 7-20 and Column 7, line 40-Column 8, line 67).

Regarding Claim 4 and 49, Perttunen et al teach the method wherein the chemical moieties are biopolymers (Column 4, lines 13-26).

Regarding Claim 5 and 50, Perttunen et al teach the method wherein the biopolymers are DNA (Column 4, lines 13-26).

Regarding Claim 6 and 51, Perttunen et al teach the method wherein the memory is a database and the method additionally comprises retrieving the array related data from the memory and communicating the retrieved data to a remote location in response to receiving a communication of the identifier from the remote location (Column 8, lines 38-54).

Regarding Claim 7 and 52, Perttunen et al teach the method wherein the memory comprises a portable storage medium e.g. bar code, the method further comprising shipping the portable medium to a remote location to the end user (Column 7, line 40-Column 8, line 62, Fig. 10, # 112 & 114, Fig. 11, # 132 & 136 and Fig. 12, # 146).

Regarding Claim 8 and 53, Perttunen et al teach the method wherein the portable storage medium is shipped to the same remote location as the array i.e. user (Column 8, lines 35-42).

Regarding Claim 9 and 54, Perttunen et al teach the method wherein the substrate has applied thereto array related data e.g. identification code (Column 8, lines 1-19) but they do not teach the identification code comprises a communication address. However, Ellison et al teach the similar method of generating an array wherein the array has applied thereto identification code including a communication address from with the identity map will be communicated i.e. customer (§ 8) wherein the address on the substrate identifies customer and/or billing information. It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to include the communication address as taught by Ellison et al in the identification code on the substrate of Perttunen et al to thereby identify customer via the address as taught by Ellison et al (§ 8).

Regarding Claim 10, Perttunen et al teach a method of generating, at a central fabrication station, an addressable array of chemical moieties on a substrate comprising: depositing the moieties onto different regions of the substrate so as to fabricate the array; before the array has been exposed to a sample, saving in a memory array related data said data comprising instructions for reading the array or instruction of processing the array (Column 3, lines 54-67) wherein the array related data is saved in association with an identifier i.e. id code; applying the identifier to the corresponding substrate or corresponding housing (Column 7, line 40-Column 8, line 62, Fig. 10, # 112 & 114, Fig. 11, # 132 & 136 and Fig. 12, # 146) wherein the array and array related data is utilized by an end user (Column 8, lines 38-41 and Column 9, lines 63-Column 10, lines 2) which clearly suggests that the array is sent from the place of origin but they do

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not specifically teach shipping the fabricated array and forwarding the array related data to a remote location. However, shipping arrays to end users was well known in the art at the time the claimed invention was made as taught by Ellison et al. Ellison et al teach a similar method for generating an addressable array of chemical moieties comprising depositing moieties onto different regions of the substrate, saving in a memory array related data and shipping the array and forwarding the array related data to a remote location i.e. to shipping address contained in the machine readable information (§ 8). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the shipping of Ellison et al to the arrays of Perttunen et al and, based on the location of the end user, ship the arrays to the end user for the obvious benefits of shipping e.g. convenience and availability.

Perttunen et al further teach that the user, at a user location retrieve array related data (e.g. mapping) and selects machine readable algorithms (e.g. instructions) (Column 3, lines 45-67 and Fig. 2) for reading and processing by user (Column 5, lines 7-20 and Column 7, line 40-Column 8, line 67).

Regarding Claim 11, Perttunen et al teach the method wherein the chemical moieties are biopolymers (Column 4, lines 13-26).

Regarding Claim 12, Perttunen et al teach the method wherein the biopolymers are DNA (Column 4, lines 13-26).

Regarding Claim 13, Perttunen et al teach the method wherein the memory is a database the method additionally comprising retrieving the array related data for arrays from the memory and communicating the data to a remote location in response to

receiving a communication of associated identifiers from the remote location Column 8, lines 38-54).

Regarding Claim 14, Perttunen et al teach the method wherein for each of the multiple array the corresponding identify map and associated identifier are saved on a memory comprising a portable computer readable storage medium wherein the array is used by an end user (Column 7, line 40-Column 8, line 62, Fig. 10, # 112 & 114, Fig. 11, # 132 & 136 and Fig. 12, # 146) but they do not specifically teach shipping the portable storage mediums to multiple remote locations. However, shipping arrays to end users was well known in the art at the time the claimed invention was made as taught by Ellison et al. Ellison et al teach a similar method for generating an addressable array of chemical moieties comprising depositing moieties onto different regions of the substrate, saving in a memory array related data and shipping the array and forwarding the array related data to a remote location i.e. to shipping address contained in the machine readable information (§ 8). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the shipping of Ellison et al to the arrays of Perttunen et al and, based on the location of the end user, ship the arrays to the end user for the obvious benefits of shipping e.g. convenience and availability.

Regarding Claim 15, Perttunen et al teach the method wherein each of the portable storage mediums and the corresponding fabricated array are used by the at the same remote location i.e. end user from which the set of biopolymers used in fabricating the array was received (Column 7, line 40-Column 8, line 62).

Regarding Claim 16, Perttunen et al teach the method wherein each of the substrates comprise an identification code which identifies array related data e.g. identification code (Column 8, lines 1-19) but they do not teach the identification code comprises a communication address. However, Ellison et al teach the similar method of generating an array wherein the array has applied thereto identification code including a communication address from with the identity map will be communicated i.e. customer (§ 8) wherein the address on the substrate identifies customer and/or billing information. It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to include the communication address as taught by Ellison et al in the identification code on the substrate of Perttunen et al to thereby identify customer proving the array samples via the address as taught by Ellison et al (§ 8) for the obvious benefits of maintaining correct correlations between the customer and the array.

6. Claims 45-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Perttunen et al (U.S. Patent No. 5,968,728, issued 19 October 1999) in view of Ellison et al (U.S. Patent Application Publication No. 2002/0086319A1, filed 13 November 2000) as applied to Claims 1 and 2 above and further in view of Zeleny et al (U.S. Patent No. 6,215,894, filed 26 February 1999).

Regarding Claims 45 and 46, Perttunen et al teach a method of generating an addressable array of chemical moieties on a substrate comprising: depositing the

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moieties onto different regions of the substrate so as to fabricate the array; before the array has been exposed to a sample, saving in a memory array related data said data comprising instructions for reading the array or instruction of processing the array (Column 3, lines 54-67) wherein the array and array related data is utilized by an end user (Column 8, lines 38-41 and Column 9, lines 63-Column 10, lines 2) which clearly suggests that the array is sent from the place of origin but they do not specifically teach shipping the fabricated array and forwarding the array related data to a remote location. However, shipping arrays to end users was well known in the art at the time the claimed invention was made as taught by Ellison et al. Ellison et al teach a similar method for generating an addressable array of chemical moieties comprising depositing moieties onto different regions of the substrate, saving in a memory array related data and shipping the array and forwarding the array related data to a remote location i.e. to shipping address contained in the machine readable information (§ 8). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to apply the shipping of Ellison et al to the arrays of Perttunen et al and, based on the location of the end user, ship the arrays to the end user for the obvious benefits of shipping e.g. convenience and availability.

Perttunen et al teach the method wherein the array related data generates mappings of the array and directs operation of the scanning system (Column 3, lines 54-67) but they do not specifically teach that the data includes an indication as to whether a particular type of control probe is present on the array. However, control probes were well known in the art at the time the claimed invention was made as taught by Zeleny et

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al who teach that the control probes are useful for calibrating and adjusting the scanner thereby facilitating scanning (Column 3, lines 19-25). It would have been obvious to one of ordinary skill in the art at the time the claimed invention was made to modify the data of Perttunen et al by including data as to whether a control probe is present on the array for the expected benefit of adjusting and calibrating the scanner as taught by Zeleny et al (Column 3, lines 19-25).

Response to Arguments

7. Applicant asserts that combination of the cited references does not provide all of the claimed elements i.e. "automatically selecting one or more machine readable algorithms for how to read an array or machine readable algorithms for how to process data from an array following reading of the array based on said retrieved array related data". The argument has been considered, however it is maintained that the reading and data processing at user locations is obvious as cited above. Specifically, Perttunen et al teach that the user, at a user location retrieves array related data (e.g. mapping) and selects machine readable algorithms (e.g. instructions) (Column 3, lines 45-67 and Fig. 2) for reading data and processing the data read by user (Column 5, lines 7-20 and Column 7, line 40-Column 8, line 67).

Applicant asserts that neither the above cited teaching nor entire teaching of Perttunen teaches "reading said array according to an algorithm of said one or more automatically selected machine readable algorithms to obtain data". The argument has been considered but is not deemed sufficient to overcome the above rejection. As

Applicant notes, Pettunen discloses detecting hybridization results and deriving information based on those results. The “results” obtained are clearly encompassed by the “data” as recited in the claims. Furthermore, the claims do not define any specific data obtained or processed. As written, the claims encompass reading a barcode which is clearly taught by the references.

Additionally, Ellison also teaches the similar method wherein the array is read, data is obtained, data is processed to obtain a result as broadly claimed (see Example 1-3).

Conclusion

8. No claim is allowed.
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to BJ Forman whose telephone number is (571) 272-0741. The examiner can normally be reached on 6:00 TO 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner’s supervisor, Ram Shukla can be reached on (571) 272-0735. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BJ Forman
Primary Examiner
Art Unit 1634

/BJ Forman/
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